



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,891	06/14/2005	Raymond Seltzer	HC/1-22816/A/CGC 2135/PCT	5156
324	7590	01/30/2008	EXAMINER	
JoAnn Villamizar Ciba Corporation/Patent Department 540 White Plains Road P.O. Box 2005 Tarrytown, NY 10591			DEES, NIKKI H	
			ART UNIT	PAPER NUMBER
			1794	
			MAIL DATE	DELIVERY MODE
			01/30/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/538,891	Applicant(s) SELTZER ET AL.	
	Examiner Nikki H. Dees	Art Unit 1794	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 June 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-20 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

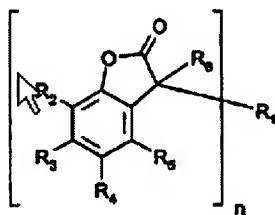
- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION*****Election/Restrictions***

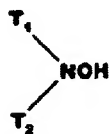
1. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

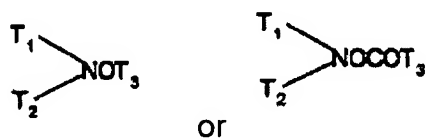
- I) 3-arylbenzofuranones of the formula



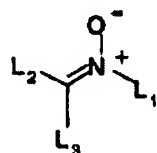
- II) a long-chain N,N-dialkylhydroxylamine of the formula



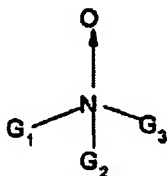
- III) a substituted hydroxylamine of the formula



- IV) a nitron of the formula



or V) an amine oxide of the formula



If species (I) is elected, applicant must further select  $n=1$  or  $n=2$ .

Following the selection of  $n=1$  or  $n=2$ , Applicants must further select a single moiety, or related moieties, for each of the R substitutions as required for the selected compound. The groups as defined below offer guidance as to what the Examiner considers related moieties. The additional groups M, X, n, p, q, r, and s, if necessary for the selected compound, may stand as laid out in claim 1.

If species (II) is elected, T<sub>1</sub> and T<sub>2</sub> may stand as independently straight or branched chain alkyls of 6 to 36 carbon atoms.

If species (III) is elected, the T groups must be limited as set forth below:

T<sub>1</sub> must be selected as one of the following groups:

Group I: straight or branched chain alkyl of 1-36 carbon atoms;

Group II: cycloalkyl of 5-12 carbon atoms;

Group III: aralkyl of 7-9 carbon atoms;

Group IV: aralkyl of 7-9 carbon atoms substituted by 1 or 2 alkyl groups of 1-12 carbon atoms;

Art Unit: 1794

Group V: aralkyl of 7-9 carbon atoms substituted by 1 or 2 halogen atoms.

T<sub>2</sub> must be selected as one of the following groups:

Group I: H;

Group II: the same as T<sub>1</sub>.

T<sub>3</sub> must be selected as one of the following groups:

Group I: allyl;

Group II: straight or branched chain alkyl of 1-36 carbon atoms;

Group III: cycloalkyl of 5-18 carbon atoms;

Group IV: cycloalkenyl of 5-18 carbon atoms;

Group V: straight or branched chain alkyl of 1-4 carbon atoms substituted by phenyl;

Group VI: straight or branched chain alkyl of 1-4 carbon atoms substituted by phenyl substituted by one or two alkyl groups of 1-4 carbon atoms;

Group VII: straight or branched chain alkyl of 1-4 carbon atoms substituted by phenyl substituted by one or two alkyl halogen atoms.

If species (IV) is elected, the L groups must be limited as set forth below:

L<sub>1</sub> must be selected as one of the following groups:

Group I: straight or branched chain alkyl of 1-36 carbon atoms;

Group II: cycloalkyl of 5-12 carbon atoms;

Group III: aralkyl of 7-9 carbon atoms;

Art Unit: 1794

Group IV: aralkyl of 7-9 carbon atoms substituted by 1 or 2 alkyl groups of 1-12 carbon atoms;

Group V: aralkyl of 7-9 carbon atoms substituted by 1 or 2 halogen atoms.

L<sub>2</sub> and L<sub>3</sub> must each be selected as one of the following groups:

Group I: H;

Group II: straight or branched chain alkyl of 1-36 carbon atoms;

Group III: cycloalkyl of 5-12 carbon atoms;

Group IV: aralkyl of 7-9 carbon atoms;

Group V: aralkyl of 7-9 carbon atoms substituted by 1 or 2 alkyl groups of 1-12 carbon atoms;

Group VI: aralkyl of 7-9 carbon atoms substituted by 1 or 2 halogen atoms;

Group VII: L<sub>1</sub> and L<sub>2</sub> taken together to form a 5 or 6 membered ring including N.

If species (V) is elected, the G groups must be limited as set forth below:

G<sub>1</sub> and G<sub>2</sub> must each be selected as one of the following groups:

Group I: straight or branched chain alkyl of 6 to 36 carbon atoms;

Group II: aryl of 6-12 carbon atoms;

Group III: cycloalkyl of 5-36 carbon atoms;

Group IV: alkycycloalkyl of 6-36 carbon atoms;

Art Unit: 1794

Group V: cycloalkylalkyl of 6-36 carbon atoms.

G<sub>3</sub> must be selected as one of the following groups:

Group I: straight or branched chain alkyl of 1 to 36 carbon atoms;

Group II: aryl of 6-12 carbon atoms;

Group III: aralkyl of 7-36 carbon atoms;

Group IV: cycloalkyl of 5-36 carbon atoms;

Group V: alkycycloalkyl of 6-36 carbon atoms;

Group VI: cycloalkylalkyl of 6-36 carbon atoms.

Substitution for any one of the aryl groups must be selected as one of the following group:

Group I: 1 to 3 halogen atoms;

Group II: alkyl of 1-8 carbon atoms

Group III: alkoxy of 1 to 8 carbon atoms.

If any alkyl, aralkyl, alkaryl, cycloalkyl, alkycycloalkyl and cycloalkylalkyl group selected is to be interrupted, a single interrupting group must be selected from those given in Claim 1. The exact number of interruptions, from 1 to 16, must be specified.

Further, if any alkyl, aralkyl, alkaryl, cycloalkyl, alkycycloalkyl and cycloalkylalkyl group selected, a single substitution group must be selected from those given in claim 1.

If the following substituents are present in the interrupting or substitution group, the must be selected as one of the given choices.

Art Unit: 1794

G<sub>4</sub>, if present in the interrupting or substituting group, may stand as H or an alkyl of 1-9 carbon atoms.

R<sub>x</sub>, if present in the interrupting or substituting group, may stand as H or methyl.

L must be selected as one of the following groups:

Group I: H or hydroxyl;

Group II: straight or branched chain alkyl;

Group III: -C(O)R moiety where R is a C<sub>1-30</sub> straight or branched chain alkyl;

Group IV: -OR<sub>y</sub> moiety.

If group IV (-OR<sub>y</sub> moiety) is selected, R<sub>y</sub> must be selected as one of the following groups:

Group I: C<sub>1-30</sub> straight or branched chain alkyl;

Group II: C<sub>2</sub>-C<sub>30</sub> alkenyl;

Group III: C<sub>2</sub>-C<sub>30</sub> alkynyl;

Group IV: C<sub>5</sub>-C<sub>12</sub> cycloalkyl;

Group V: C<sub>6</sub>-C<sub>10</sub> bicycloalkyl;

Group VI: C<sub>5</sub>-C<sub>8</sub> cycloalkenyl;

Group VII: C<sub>6</sub>-C<sub>10</sub> aryl;

Group VIII: C<sub>7</sub>-C<sub>9</sub> aralkyl;

Group IX: C<sub>7</sub>-C<sub>9</sub> aralkyl substituted by alkyl or aryl;

Group X: C<sub>7</sub>-C<sub>9</sub> aralkyl substituted by -CO(D).

If group X is selected, D must be selected as one of the following groups:



Group I: C<sub>1-18</sub> alkyl;

Group II: C<sub>1-18</sub> alkoxy;

Group III: phenyl;

Group IV: phenyl substituted by hydroxyl, alkyl or alkoxy;

Group V: amino;

Group VI: amino mono- or di-substituted by alkyl or phenyl.

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

2. The claims are deemed to correspond to the species listed above in the following manner:

Claims 2-4 correspond to species (I). Claims 5-7 correspond to species (II). Claim 8 corresponds to species (III). Claim 9 corresponds to species (IV). Claims 10-13 correspond to species (V).

The following claim(s) are generic: claims 1 and 14-20.

3. The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: the claims are to multiple inventions including the use of 3-arylbenzofuranones as antioxidants in food compositions, the use of N,N-dialkylamines as antioxidants in food compositions, the use of substituted hydroxylamines in food compositions, the use of nitrones in food compositions, and the use of amine oxides in food compositions.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Art Unit: 1794

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nikki H. Dees whose telephone number is (571) 270-3435. The examiner can normally be reached on Monday-Friday 7:30-5:00 EST (first Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nikki H. Dees  
Examiner  
Art Unit 1794

  
**CAROL CHANEY**  
SUPERVISORY PATENT EXAMINER